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Student Activity Participation as Affecting Scholarship

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STUDENT ACTIVITY PARTICIPATION AS AFFECTING SCHOLARSHIP

BY

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This thesis is approved as a creditable, independent investigation by a candidate for the degree, Master of Science, and acceptable as meeting the thesis requirements for this degree; but without implying that the conclusions reached by the candidate are necessarily the conclusions of the major department.

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CHAPTER I

INTRODUCTION

From the seventeenth century with its Latin Grammer Schools to the twentieth century modern schools of today, education in the United States has progressed up a long road of achievement. What has made this possible and will continue to effect our educational system is the philosophy of education held by the American people and their educators and its means of expression through various materials and methods.

As would be expected with the changing twentieth century, great changes have also taken place in the basic concepts of educational thought and in their practices. Within the last fifty years the concept and practice of having various activities both academic and nonacademic has grown and matured with our high schools. This, by most, has been accepted and encouraged as good, and now is at the point of practice where activities are no longer considered something extra to the high school curriculum but a real part of its total scope. Students are encouraged to take active part to the extent of their abilities in high school music, dramatics, journalism, sports, clubs of the F.F.A. or F.H.A., or science types, and any of the other available activities in which they may find interest. The students in today's high schools would find it almost impossible to imagine themselves attending a high school without these opportunities and not only expect them but consider them a real part of their schooling.

If this is "taken for granted" at the high school level it is no wonder that the student upon reaching the college or university of his choice expects to find the same opportunities in activities and in higher abundance. Where the student has been able to choose from a dozen or so activities in high school, he finds available to him several dozen at the college level and the same encouragement to participate in those that interest him. It would seem logical to assume that the student who first excelled or lead in one or more high school activities would desire to do the same and would do so at college. The center from the high school team will probably still have a strong interest in sport activities and try out for the college basketball team; and the first trumpet player from the home town band will undoubtably try for the college band. Not all will succeed in duplicating their success in high school activities and not all will find themselves interested in exactly the same things. Most however will try to participate in activities either of the same type or closely related to the ones which gave them satisfaction in high school

As stated earlier, high school activities and participation in them are a definite part of our present educational philosophy and accepted as good for the student's total development at that time. But what is the outcome at the college level?

Colleges are, at present, basically inadequate for developing the total student and established primarily for scholastic adjustment and achievement with the cold formal acquisition of factual knowledge as its core. The student finds the main emphasis is now on scholastic

achievement and he is generally considered to be mature and socially adjusted to life. The activities are still available in abundance and the student is still encouraged to participate, but only as a wholesome way in which to occupy his spare time as activities are usually not considered of equal importance with scholastic achievement.

Thus the institutions of higher learning of our times are definitely different than our high schools in overall philosophy and operation. However, because the colleges do offer and encourage various activities to the students, a basic question arises. Is the desire to participate and the participation habit which was fostered and matured in our high schools now a detriment or an asset to the high school graduates in this new atmosphere where scholastic achievement dominates?

It was from the desire to learn how the activity phase of our educational philosophy, as now practiced in the American high schools, affected the college students scholastic achievement that this study was undertaken. The scope of this study could not hope to be all inclusive and conclusive and was not planned to be such. Rather the study was set up to be an initial investigation into the situation in one college in South Dakota which might serve as a "stepping stone" for further research.

Purpose of The Study

The initial purpose of the study was to correlate grades with activities to determine if there were any effects such as scholastic

benefit or detriment derived from participation in various activities. An attempt was also made to investigate apparent groupings of students as to types and numbers of activities engaged in and their affects on grade point average, and to locate any types of activities which appeared to hinder or abet scholastic achievement.

Assuming that larger towns were able to offer more activities in their high schools than towns with small high schools, a check was made to determine if students from the larger towns participated in more activities in college than those from smaller towns and how this participation affected their grades.

It was also a purpose of this study to discover student opinion towards college activities in reference to what the students thought they derived or did not derive from their various activities in way of academic and social accomplishment, or detriment.

It was hoped that in addition to determining the primary effects of college activities on scholastic achievement, that this study would give an insight into the pattern of college student activity participation and thus serve as a basis for various recommendations to support the fostering of activities and participation at the college and high school level.

CHAPTER II

REVIEW OF THE LITERATURE

The available information on activities at the various levels of educational instruction closely relate the Activity Curriculum or School with school activities (often refered to as extra-curricular or co-curricular). According to Flaun (4) the conventional high school stresses pupil dependance upon teacher and textbook and does not make for self-thinking learners or prepare students for carrying out democratic responsibilities, while the Activity school or school with activities does these things. Flaun believes the student lives in the present and must be helped to live constructively today so that he may live well and constructively tomorrow. He states, "The activity high school considers itself a major agent in the construction of society, its perpetuation, and its reconstruction. Activity approach becomes a way of life."

It appears that through the acceptance of the Activity School or Curriculum concept of education, activities have gained a prominent place in the educational instutions of today and in the education philosophy of many educators. Dewey and Kilpatrick are two educators whose philosophy of education first included activities in the school and considered them a definite part of education. According to Morse (10) John Dewey's theory of an activity program stems from his belief that children are born with impulses to investigate, to construct, and to communicate. Woody (20) quotes Kilpatrick as saying, "An activity

is a unitary sample of actual child living as nearly complete and natural as school conditions will permit."

From more recent educators such as Ross and Stanley (13) is stated, "Although all teaching procedures recognize the value of interest, the activity movement emphasizes more than any other program the importance of inner drives and interests of the pupil, as opposed to extraneous motivation of any kind." These authors besides expressing the strong part activities should play in an educational program also expressed the opinion that since activities do enter into education so greatly there should be some measurement of these activities for more definite understanding of their value and effect.

Educators such as Frederick (5) and Morse (10) advocate that student activities offer many learning situations which, because of their natural interest can be used to great advantage, and according to Morse (10) one should,

> Think of a student not with an intellect separate from other aspects of his living, but as an individual whose ideas, attitudes and interests are shaped in part by his contacts with other people, by his experiences outside of the classroom as well as within it, and whose adjustment or lack of adjustment to his many problems of living has a strong affect upon his academic learning.

Jones (8) has based an entire book on extra-curricular activities, on his belief that activities are good and should be encouraged by various means. Jones' book lacks factual data to support his basic premise but does state, "The overwhelming majority of those who are responsible for the direction of secondary schools are convinced of the values to pupil participants from extra-curricular activities."

Russell (15) looks at it from another point of view and gives for his support of activities in the school the reason that the home no longer provides for the child as it did in the past and that activities must supplement and augment the home of today. In relation to activities in general he states that modern education must, ".. increase the reality of experience and it is in extracurricular activities, activities in which the pupil can maintain an active and constructive part, that experiences can be made most real and most effective."

In specific reference to activities in the high schools Meyers and Williams (11), Spears (17), Risk (12), and Williams (19) are decidedly in favor of activities as a part of education and feel they help in practical application of learning, but offer little in the way of real supporting evidence. Williams (19) expresses student participation in activities as, "..experiences as participators in the real business of living."

Another educator who strongly supports activities in the high school is McKown (9). However, he suggests that they be a part of the entire system, co-curricular and not something extra. McKnown supports his belief in activities on the work of Shannon (16) who reflected on the work of seven investigations of the relationship between extracurricular participation and post-school success. Although the work evaluated by Shannon seems more subjective than objective, Shannon concludes, "With the conclusions of these researches pointing in the same direction, the case for school

activities is clear; they, more than routine class activities mold wholesome and attractive personalities."

One of the few educators to commit himself against activities in the school is Bagley (14), who in his book Progressive Education is too Soft, completely objects to activities and Activity Curriculums. He believes activities make for only a dabbling with knowledge, a failure to develop fundamental skills needed elsewhere in life, and lead to pampering and sentimentalizing.

Actual reported research into the value of activities in high school education appears scarce in the literature and the only research located was dated by 30 years and did not tend to support high school activities as beneficial. Rugg (14) upon making investigations relating to extra-curricular activities wrote, "These general values claimed include: 1) improved discipline; 2) improved scholarship; 3) relation of school and community; and 4) retention in school. One fails to find much objective and quantitative evidence to substantiate such claims." Without evidence on his own part he further states, "It is a known fact that pupils are devoted to the extra-curricular at the expense of the formal studies." Commenting in general on evaluation of activities Rugg states,

> A second thing we have done is again a typical American practice. We have attempted to justify these activities after they have been almost perforce spontaneously organized. We have been assigning values to them for some years, in out discussions and published writings. For each and every type of student activity one finds almost the entire range of educational values claimed. These justifications or claims for student activities are in reality assumptions. They are entitled to serious

> consideration as theoritical but unproved values. In fact, they are a necessary prelude or first step in any objective validation or scientific justification of the tremendous amount of attention these activities are now receiving in the school program. - Indeed, the present sweeping claims for these activities, which can really be little more than vague assumptions, will in the writer's judgement, have to be greatly modified.

An interesting piece of work covered by Rugg in relation to scholarship development often claimed for athletics was a thesis which delt with scholarship attainment of athletes and non-athletes in four high schools in Colorado. General conclusions as summarized by Rugg were, "The athletes are older than the non-athletes. Non-athletes surpass in mental score, achievement score, and in accomplishment in accordance to ability."

Johnston and Faunel (7) in consideration of the comparisons available on scholastic success of pupils who participated in extra-curricular activities and those who did not, state,

> One of the best was made by Swanson (18). On the basis of careful statistical techniques, contrasting non-participants, leaders and athletes, he came to the conclusion that 'participation does not significantly affect scholastic standing.' In concluding this discussion the authors wish to emphasize that evaluation of extra-curricular outcomes is an inescapable responsibility of the concerned to make its maximum contribution to the growth of young people through the activity program.

Opinions as to the value or non value of activities on the college campus were as diversified as those concerning high school activities and the supporting evidence for these opinions were even more lacking.

Evans (3) an advocate of liberal education expresses his beliefs as follows,

> The events and activities in which a student participates outside of the classroom, library, and laboratory are highly important in his social and educational development. - Several values of extra-curricular activities are worthy of mention. In the first place, the student who engages in a reasonable number of nonscholastic events on campus is freed from the morbid tendency to exaggerate his own troubles or prejudices. - In the second place extra-curricular activities enable a student to enjoy the companionship and influence of many types of people. - Finally in extra-curricular affairs the student frequently meets men and women of the community who are leaders in the world of practical affairs. - Often the extra-curricular experiences bring delights which continue long after graduation.

However, Evans does express a strong warning for participants and he says,

> Students come to college to study, and not to play. The participant must be careful that his extra-curricular activities are not too numerous; he cannot afford to let them interfere with his homework. Finally the student must not allow success in the extra-curricular area to go to his head.

Final and cryptic words toward activities in general are expressed by Hutchins (10), a strong critic of the activity movement within the college, who calls the movement "vocationalism" and "presentism."

The only comprehensive piece of research found concerning evaluation of activities on a college campus was a report published in 1929 from the University of Minnesota by Chapin (2). The work was carried out by the sampling of a student body of a large college as compared to a small student body as indigenous to South Dakota State College, and evaluations and conclusions were without aid of statistical analysis. He concluded in relation to the social and

educational aspects and values of extra-curricular activities of students at Minnesota University, that,

> Students who participate in several campus activities have a slightly higher average of academic achievement than students who are less active or inactive in campus affairs. Students who participate in activities that are predominately intellectual in character tend to maintain a higher average standard of academic achievement than those engaged in activities that are chiefly of a physical or social character.

Chapin went even further in his conclusions and said,

> These facts seem to indicate that students may engage in several campus activities without sacrificing their academic achievement. The further inference indicated by these facts is that it is probably the students of higher intelligence who are at the same time those who are good students and leaders in campus activities.

Later he became more conservative and expressed the opinion, "But we do not know whether or not the active students would have been even better scholars had they engaged in fewer extra-curricular activities."

From the review of literature it appears that the role of extra-curricular activities as affecting academic acomplishment at institutions of higher learning has not been adequately investigated and thus a study of this type as related to a small Agricultural and Mechanical Arts College such as South Dakota State College, using modern statistical procedures is warranted.

Summary

Various views of educators with respect to student participation in activities are given. The majority of these were found

to favor activity participation; however, their views were on the whole not backed up with experimental evidence. From the literature it appears that research in this area is needed.

CHAPTER III

EXPERIMENTAL METHODS

A. Materials Used in Gathering Data

A survey was taken among the first-quarter Sophomore class of 1961 at South Dakota State College to ascertain the participation of this group in the various college activities. Sophomores were selected for this study because it was assumed that they, as a whole, participated equally, if not more, in student activities than their Freshman, Junior, and Senior contemporaries. In the Freshman year the student first learns about the available activities, becomes aquainted with them and starts his participation, while the Sophomore year is the time of more extensive participation. This strong active participation undoubtedly carries over to the Junior and Senior years with the majority of students, but these are the years when the importance of academic achievement for future employment becomes evident, selection of mates takes place or has taken place, graduation and future plans all collaborate to detract from participation in campus activities. Thus the Sophomore class was felt to be the one most involved with campus activities and selected to furnish the data for this study.

Student Questionnaires

A questionnaire (see Apendix A) was distributed to 50 first-quarter male Sophomore students through Reserve Officers

Training Corps (R.O.T.C.) class instructors. Three hundred and twenty-five were returned and of this number, 203 were sufficiently complete as to be usable. At the same time, 150 questionnaires were distributed to first-quarter Sophomore women through college dormitory mail facilities. Fifty-nine were returned with 47 filled out sufficiently to merit use.

The questionnaire consisted of a list of all official organized activities and sports (player and observer) on the South Dakota State College Campus. Students were asked to check the activities engaged in during the fall quarter of 1958 and to estimate the average number of hours per week spent in each activity. In addition, a page of questions was included in which the student expressed his opinion as to the benefits or detriments of activities towards his scholastic achievement and social adjustment, or, if a non-participant, the reasons for his inactivity. A space was also provided for the student's name, year in college and home-town.

Permanent record cards

Arrangements were made with the Office of Admission and Records to use student permanent record cards for securing academic data about the students used in the study. Data taken from the permanent record cards consisted of each student's total number of grade points earned during the fall quarter of 1959 and the total number of credits taken by each student for the same period. From these data the grade point average was determined.

The grading system at South Dakota State College is based on

the quality of work done by the students which is indicated by six letter grades. Each letter grade is worth a given number of grade points: A, B, C, D, E, and F are worth four, three, two, one, and zero grade points respectively, and in addition refer to proficiency classifications of, respectively, exceptionally high, superior, fair, passing, satisfactory, and failure. To determine a student's grade point average over a given period of time, the respective grade points earned in the course work covered during that time are multiplied by the number of credits given for the respective courses and the total divided by the total course credits.

B. Statistical Procedures

All data in this study were analyzed by means of the appropriate statistical method. For differences involving two groups the standard "t" was used. For differences involving multiple groups the analysis of varience "F" test was employed. All correlations were calculated by means of the standard "r". The Chi-square "goodness of fit" test was used to compare percentages of the answered questions of the questionnaire. To transpose data for machine calculation in any of the above tests, the formulas of Johnson (6) were used. In all analyses, statistically significant differences were accepted at five percent as the lower level of significance.

CHAPTER IV

RESULTS

A. General Group Considerations

The number of hours of activities entered into per week by each male student was taken from the questionnaire and the mean number of hours determined for the total male sample. The same was done with the female questionnaires and the mean number of hours spent in activities determined for that group.

Grade point averages of the male students were used to determine the mean grade point average for the total sample, and the same was done with the total female sample. These data are presented in Table I.

TABLE I. MEAN GRADE POINT AVERAGE AND MEAN NUMBER OF HOURS SPENT PER WEEK IN ALL ACTIVITIES OF MALE AND FEMALE STUDENTS

	Mean hours of activities per week	Mean grade point average	Number sampled
Male	7.0	2.3	202
Female	7.1	2.6	47

Fiducial limits; Male grades 2.3 1.03; Female grades 2.6 2.01

Male

From Table I it can be seen that the mean number of hours of

activities entered into per week by the male sample was 7.0 and the mean grade point average 2.3. Since the sample included 202 cases (33 percent of the total Sophomore males), and as all male full time Sophomore students who are not veterans are required to take R.O.T.C., the course through which the questionnaire was distributed, it was considered to be a valid sampling of the normal college male Sophomores even though the percentage of the total was small. The mean hours of activities of the males corresponded closely with that of the females; however, the mean grade point average of the males was lower than the females.

Female

The mean number of hours of activities per week for the females was 7.1 and the mean grade point average 2.6. The sampling of the females included only 47 cases (30 percent of the Sophomore females) due to the poor return of the female questionnaires and was not a good sample. Thus the male sample is considered more reliable than the female which is included primarily for comparison purposes. It is of interest, however, to note that while both groups are relatively the same with respect to hours of activities, the females appear to be better with regard to scholastic achievement.

B. The Effect of Total Number of Activities on Grades

The number of hours of activities participated in by each group (male and female) was broken into three categories; low,

medium, and high corresponding to limits of 0-3, 4-10, and 11-up, hours per week respectively, and compared with the mean grade point average for each category. These data along with the percentages, and the ranges of the activities and grade averages are shown in Table II.

Males

Grade point averages for the various activity groups appeared not to be affected by the number of hours of activities, as they closely approximated the grade point average for the total male sample. A correlation "r" between the average number of hours of participation per week of the three categories and their mean grade point averages was found to be 0.1. Thus differences were not statistically significant. It is worth noting, however, that 47 percent of the males fell in the low category (0-3 hours) of participation in activities of any type and that this group included both of the grade point extremes, i.e. 0.6 and 4.0.

Females

The mean grade point averages of the three activity categories showed a trend of increase as the number of hours of activities increased. However, all of the mean grade point averages closely approximated the mean grade point average of the total. When a correlation was calculated between the three activity categories and their respective mean grade point averages a "r" value of 0.1 was obtained, and no statistical significance was evident to support

TABLE II. MEAN GRADE POINT AVERAGE AND MEAN NUMBER OF HOURS PER WEEK SPENT IN ALL ACTIVITIES OF MALE AND FEMALE STUDENTS GROUPED ACCORDING TO LOW, MEDIUM, AND HIGH ACTIVITY PARTICIPATION

	Mean hours activities per week	Mean grade point average	Percent in group	Range: Hours of activities	Range: Grade point average
Males					
Group					
Low	1.4	2.3	47	0 - 3	0.6 - 4.0
Medium	6.6	2.3	32	4 - 10	0.7 - 3.9
High	20.5	2.4	21	11 - 49	1.2 - 3.8
Total	7.0	2.3	100	0 - 49	0.6 - 4.0
Females					
Group					
Low	1.8	2.5	26	0 - 3	0.8 - 4.0
Medium	6.5	2.6	55	4 - 10	1.6 - 3.6
High	15.9	2.7	19	11 - 23	1.5 - 3.8
Total	7.1	2.6	100	0 - 23	0.8 - 4.0

Correlation of hours activities per week on grade point average: Males "r" equals 0.1; Females, 0.1. T between female low and high group mean grade point averages equals 0.55 (T_{05} equals 2.34).

the observed trend.

In contrast to the males where 47 percent fell in the low category of participation, 55 percent of the females fell in the medium category (4-10 hours). From this it appears that females spend more hours per week engaged in campus activities than males. As with the males the lowest and highest grade point extremes fell in the low group.

C. The Effect of Academic Activities on Grades

The hours of activities participated in by the original groups (male and female) were divided into smaller groups, based on hours of participation in activities of an academic or of an athletic nature. The group containing the hours of academic activities was further divided into three categories: small, medium, and large according to participation (0-1, 2-5, and 6-up, respectively, for the males and 0-2, 3-6, and 7-up, respectively, for the females). These groups were compared with their respective calculated mean grade point averages. These data along with percentages and ranges are shown in Table III.

Males

Mean grade point averages for the three categories showed no appreciable variation among themselves and all closely approximated the mean grade point average of the total male sample. As can be seen, the mean grade point averages for the high and low categories

TABLE III. MEAN GRADE POINT AVERAGE AND MEAN NUMBER OF HOURS PER WEEK SPENT IN ACADEMIC ACTIVITIES OF MALE AND FEMALE STUDENTS GROUPED ACCORDING TO LOW, MEDIUM, AND HIGH ACTIVITY PARTICIPATION

	Mean hours activities per week	Mean grade point average	Percent in group	Ranges: Hours of activities	Ranges: Grade point average
Males					
Group					
Low	0.3	2.3	55	0 - 1	0.6 - 4.0
Medium	3.1	2.2	28	2 - 5	1.1 - 3.9
High	13.2	2.3	17	6 - 47	0.8 - 3.9
Total	3.3	2.3	100	0 - 47	0.6 - 4.0
Females					
Group					
Low	0.9	2.4	34	0 - 2	0.8 - 4.0
Medium	3.9	2.6	38	3 - 6	1.6 - 3.6
High	10.8	2.9	28	7 - 16	2.0 - 3.8
Total	4.9	2.6	100	0 - 16	0.8 - 4.0

Correlation of hours activities per week on grade point average: Females "r" equals 0.33.

were identical with the mean grade point average of the total, and the medium category differed by only 0.1.

There is a slight increase in numbers in the low category of academic activities, i.e. 55 percent as compared to 47 percent which fell in the low category of the total (Table I). It should be also noted that the high range for the low category was lowered from 3 to 1 hour of activity in academic activity hours, which indicated that male Sophomore students participate less in academic activities than in other activities. Both the high and low grade point extremes (0.6 and 4.0) again fell in the low category of participation.

Females

The mean grade point averages for the three categories of participation increased as the hours of participation increased. The mean grade point average for the medium category was identical with the mean grade point average for the total female sample, while the low and high categories differed by 0.2 and 0.3 respectively. When correlation was determined between the academic categories and their respective mean grade point averages a "r" value of 0.33 was obtained. No statistical significance was evident to support the observed trend.

Whereas 55 percent of the males fell in the low category, only 34 percent of the females were in this category. The largest percentage of participation (38 percent) for the females in academic activities was found in the medium category in contrast to the males

where the largest percentage occurred in the low category. The female low and high categories (34 and 28 percent) closely approximated the medium category and it would appear that participation in academic activities by females is more evenly distributed and tends to be higher than that of males. The grade point extremes, i.e. 0.8 and 4.0 were found in both the high and low categories.

D. The Effect of Athletic Activities on Scholarship

The hours of activities of the original groups (male and female) each were divided into academic and athletic groups as stated in section C. The athletic group was further divided into three categories: small, medium, and large according to hours of participation (0-1, 2-5, and 6-up, respectively, for the males and 0-1, 2-3, and 4-up, respectively for the females). These groups were compared with their respective calculated mean grade point averages. These data along with percentages, and ranges are shown in Table IV.

Males

No appreciable differences were noted with respect to grade point averages. The medium and high categories were identical with the mean grade point average for the total sample while the low category deviated from the total mean average by only 0.1.

The highest percentage (51 percent) was again concentrated in the low category; although this was four percent lower than the 55 percent of the academic low (Table III), an increase from the 17

TABLE IV. MEAN GRADE POINT AVERAGE AND MEAN NUMBER OF HOURS PER WEEK SPENT IN ATHLETIC ACTIVITIES OF MALE AND FEMALE STUDENTS GROUPED ACCORDING TO LOW, MEDIUM, AND HIGH ACTIVITY PARTICIPATION

	Mean hours activities per week	Mean grade point average	Percent in group	Range: Hours of activities	Range: Grade point average
Males					
Group					
Low	0.3	2.4	51	0 - 1	0.8 - 4.0
Medium	3.0	2.3	27	2 - 5	0.6 - 3.8
High	12.8	2.3	22	6 - 32	1.3 - 3.8
Total	3.7	2.3	100	0 - 32	0.6 - 4.0
Females					
Group					
Low	0.5	2.6	51	0 - 1	0.8 - 4.0
Medium	2.1	2.7	32	2 - 3	1.8 - 3.8
High	8.0	2.3	17	4 - 23	1.5 - 3.2
Total	2.3	2.6	100	0 - 23	0.8 - 4.0

T between female high and total group mean grade point average equals 1.58 (T_{05} equals 2.00).

percent in the academic high category (Table III) to 22 percent in the athletic high was noted. From this is inferred that although male participation on the whole is low, males participated slightly more in athletic than in academic activities.

Again the high grade point range of 4.0 fell in the low category; however, the low range fell in the medium category of participation.

Females

It is obvious that there is no statistical correlation between mean grade point averages and the hours of participation in athletic activities as both the low and medium mean grade point averages closely approximate the mean for the total sample. However, it was noted that the mean grade point average for the high category of hours of participation was 0.3 lower than the total. When a standard "t" was run between the mean grade point average of the high category and the total, the difference was not statistically significant.

The highest percent of the sampling (51 percent) fell in the low category and the smallest (17 percent) in the high category, in contrast to 34 and 28 percent respectively, in the low and high categories of academic achievement. This indicates that the females sampled spent more hours in academic than in athletic activities. As previously found with the female group, both the high and low range of grade point averages (0.8 and 4.0) were found in the low

category.

It is worth noting that over half (51 percent) of both the male and female students participated in one hour or less of athletic activities per week.

E. The Effect of Various Combinations of Academic and Athletic Activities on Scholarship

The three categories, high, medium, and low obtained from the hours of participation in academic activities (section C) were combined with the three groups of athletic activity (section D), in all possible combinations. The nine combinations which resulted were compared with their respective mean grade point averages. The various combinations, mean grade point averages, and hours of participation along with percentages and ranges are shown in Table V for males and Table VI for females.

Males

No statistical differences were found between the various combinations and their respective mean grade point averages when compared by an analysis of variance. However, since the analysis of variance test tends to cover up true differences between the extremes, a standard "t" test was run between the high and low extremes and each against the total. The "t" between high academic-medium athletic (HA-MAt) and low academic-medium athletics (LA-MAt) was 1.64 (T_{05} equals 2.03), between HA-MAt and the total, 1.10 (T_{05} equals 1.97), and between LA-MAt and the total, 0.87 (T_{05} equals

TABLE V. MEAN GRADE POINT AVERAGE AND MEAN NUMBER OF HOURS SPENT PER WEEK BY MALES IN VARIOUS GROUPINGS OF HIGH, MEDIUM, AND LOW ACADEMIC ACTIVITY PARTICIPATION WITH HIGH, MEDIUM, AND LOW ATHLETIC ACTIVITY PARTICIPATION

Group	Mean hours activities per week	Mean grade point average	Percent in group
HA plus HAt*	30	2.3	3
HA plus MAt	16	2.7	5
HA plus LAt	14	2.2	9
MA plus HAt	16	2.2	6
MA plus MAt	6	2.4	7
MA plus LAt	4	2.2	14
LA plus HAt	12	2.4	12
LA plus MAt	3	2.1	14
LA plus LAt	0.6	2.4	30
Total	7	2.3	100

*HA, MA, LA designate, respectively, high, medium, and low academic groups; HAt, MAt, and LAt designate, respectively, high, medium, and low athletic activity groups.

T between HA-MAt and LAMAt equals 1.64 ($T_{.05}$ equals 2.03); between HAMAt and Total equals 1.10 ($T_{.05}$ equals 1.97); between LA-MAt and Total equals 0.87 ($T_{.05}$ equals 1.97).

TABLE VI. MEAN GRADE POINT AVERAGE AND MEAN NUMBER OF HOURS SPENT PER WEEK BY FEMALES IN VARIOUS GROUPINGS OF HIGH, MEDIUM, AND LOW ACADEMIC ACTIVITY PARTICIPATION WITH HIGH, MEDIUM, AND LOW ATHLETIC ACTIVITY PARTICIPATION

Group	Mean hours activities per week	Mean grade point average	Percent in group
HA plus HAt*	20	2.3	2
HA plus MAt	13	2.9	15
HA plus LAt	11	2.8	11
MA plus HAt	9	2.3	2
MA plus MAt	6	2.7	13
MA plus LAt	5	2.5	23
LA plus HAt	9	2.3	13
LA plus MAt	4	2.0	4
LA plus LAt	1	2.6	17
Total	7	2.6	100

*HA, MA, LA designate, respectively, high, medium, and low academic groups; HAt, MAt, and LAt designate, respectively, high, medium, and low athletic activity groups.

T between HA-MAt and LAMAt equals 3.3 ($T_{.05}$ equals 2.36); between MA-MAt and Total equals 1.22 ($T_{.05}$ equals 2.00); between LA-MAt and Total equals 3.20 ($T_{.01}$ equals 2.67).

1.97). Thus no statistical significant differences were obtained from the data.

Thirty percent of the total male sample fell in the low academic-low athletic combination and only 3 percent in the high academic-high athletic. The highest mean grade point average was obtained by the high academic-medium athletic combination of data.

Females

No statistical difference occurred in the female data as with the male data when an analysis of variance "F" test was used. Once again the standard "t" test was used to check differences between the high and low extremes and each against the total. The "t" between the high academic-medium athletic (HA-MAt) and the low academic-medium athletic (LA-MAt) was 3.3 (T_{05} 2.36), between HA-MAt and the total, 1.22 (T_{05} 2.00), and between LA-MAt and the total, 3.20 (T_{05} 2.69). This established a significant difference between the mean grade point average of the HA-MAt and of the LA-MAt combination, and between the later and the total. Thus the students engaged in high academic-medium athletic activities received higher grades and the students engaged in low academic-medium athletic activities received lower grades than the students in any other combinations; however, this may be biased because of the limited female sample.

It should be noted that the high and low extremes of the male students were found in the same combinations as those of the female

even though the extremes of the males did not prove to be statistically significant.

The highest percentage of female participation was found in the medium academic-low athletic combination (23 percent) and the lowest (2 percent) in the high academic-high athletic combination.

F. The Effect of Size of Home-town on Scholarship and Activities

The home-town of each student was obtained from the questionnaire and those of each group (male and female) divided into three categories according to size. According to the 1950 census, towns with populations of less than 1,000 were placed in the small category, those 1,000 to 5,000 in the medium, and those over 5,000 in the high category. Mean hours of participation as well as mean grade point averages were calculated for each respective category. The categories, hours of participation, mean grade point averages, as well as percent of samples are given in Table VII.

Males - a) activities

From the data it can be seen that the average hours of participation per week were the same for the large and medium categories, but were low in the small home-town category. A standard "t" test was used between the hours of participation of the large and small home-town categories and a t of 1.85 (T_{05} 1.98) obtained, approaching statistical significance. Since the medium category contained 33 percent of the samples while the large

TABLE VII. MEAN GRADE POINT AVERAGE AND MEAN NUMBER OF HOURS SPENT PER WEEK BY MALE AND FEMALE STUDENTS ACCORDING TO SMALL, MEDIUM, AND LARGE HOME-TOWN GROUPINGS

	Mean hours activities per week	Mean grade point average	Percent in group
Males			
Town size			
Large*	8	2.3	29
Medium	8	2.3	33
Small	5	2.3	38
Total	7	2.3	100
Females			
Town size			
Large	8	2.4	23
Medium	6	2.6	28
Small	7	2.7	49
Total	7	2.6	100

*Large, Medium, and Small, designate, respectively, populations (1950 census) of 5,000 - up, 1,000 - 5,000, and 1 - 1,000.

T between female Large and Small equals 0.92 (T_{05} 2.04); between female Medium and Small equals 2.19 (T_{05} 1.98); between male Large and Small equals 1.85 (T_{05} 1.98).

category contained only 29 percent, and since there was a possibility that a larger number of cases would bear out significant differences a "t" test was run between the medium and small categories and a t of 2.19 (T_{05} 1.98) calculated. Thus a significant difference exists between the average hours of participation in activities of Sophomore males from small and medium sized towns. The students from towns under 1,000 participated in less hours of activities in college than those from towns over 1,000 in population. It should be mentioned that the largest percentage of the students sampled (38 percent) came from towns with populations of 1,000 or under.

b) Scholarship

The mean grade point average for each of the three categories is identical with the mean grade point average for the total group showing no difference between size of home-town and grade point average.

Females - a) activities

The average hours of participation in activities of women in the three home-town categories were almost identical with the total average, the small category being identical, and the other two deviating by only one hour each. From these data it was apparent that there were no significant differences between hours of participation and size of home-town for the females sampled. In this sampling 49 percent of the students came from home-towns with

populations of 1,000 or less and only 23 percent from towns over 5,000.

b) Scholarship

The mean grade point averages for the three categories showed slight differences. Even the difference between the lower 2.4 mean of the large category and the 2.7 of the small home-town category was not real as a standard "t" run between the two gave a "t" of only 0.92 (T_{05} 2.04).

C. The Effect of Out-of-state High School Experience on Activities and Scholarship

The students in the total groups (male and female) were divided into categories of residents and non-residents of South Dakota. These categories were compared with respect to total hours of participation in all activities, academic activities, and athletic activities, and their respective mean grade point averages, to determine the effect, if any, of the out-of-state educational systems on college activity participation and scholarship. These data along with percentages are given in Table VIII.

Males

When total hours in activities and mean grade point averages were compared for resident and non-resident, no appreciable differences were noted. Even when the total hours in activities were broken down to academic and athletic activities, no appreciable

TABLE VIII. MEAN GRADE POINT AVERAGE AND MEAN NUMBER OF HOURS SPENT PER WEEK IN ALL ACTIVITIES, ACADEMIC ACTIVITIES, AND ATHLETIC ACTIVITIES OF MALE AND FEMALE STUDENTS ACCORDING TO IN-STATE OR OUT-OF-STATE RESIDENCE

Males

	Mean hours activities per week		Mean grade point average		Percent in group	
Activity type	In*	Out**	In	Out	In	Out
All	7	7	2.3	2.2	72	28
Academic	3	3	2.3	2.5	72	28
Athletic	4	5	2.3	2.2	72	28

Females

Activity type						
All	7	6	2.6	2.8	89	11
Academic	6	2	2.6	2.7	89	11
Athletic	2	2	2.6	2.6	89	11

*In-State Residence
**Out-State Residence

differences could be found. The percentage of non-resident students among Sophomore males was 28.

Females

When total hours in activities and mean grade point averages were compared for resident and non-resident females, no significant differences were found as was true for the male sample, and, in a like manner, when the total hours were divided into academic and athletic participation and compared, no appreciable differences could be obrained. While over $\frac{1}{4}$ of the males sampled were non-residents, only 11 percent of the females came from out-of-state.

H. Student Attitudes Toward Activities.

The last page of the questionnaire (see Appendix A) included a list of questions to determine how the students who were or were not engaged in activities felt about their participation or non-participation. These data are shown in Tables IX and X.

Active students

Sixty-seven percent of the males and 89 percent of the females participated in activities and though participation was higher for the female group, the trends of the male and female groups were the same and will be discussed together under the separate question headings.

TABLE IX. STUDENT OPINION OF PARTICIPANTS WITH RESPECT TO SCHOLASTIC AND SOCIAL BENEFITS OR DETRIMENTS OF ACTIVITY PARTICIPATION

Question*	Percent answering**	
	Male	Female
A. Do you feel that the time involved was worthwhile?		
Yes	90	86
No	5	0
Don't know	2	4
No answer	3	10
B. Do you think your activities:		
Interfered with your studies.	17	4
Helped your studies.	21	24
Had no bearing on studies.	52	62
No answer.	10	10
C. Would you like to participate in:		
More activities.	51	48
Less activities.	1	0
No change.	40	42
No answer	8	10
D. Do you think your activities helped you:		
Socially	48	52
Scholastically	2	0
Both	32	34
Neither	9	2
No answer	9	12

*See Appendix A

**Total percent participating students: male 67, female 89.

Chi-square values for males, questions A,B,C, and D were: 207 (CSq_{01} 9.2), 33.4 (CSq_{01} 9.2), 85.9 (CSq_{01} 9.2), and 79.7 (CSq_{01} 11.34), while those of the female were: 65, 23, 18.7, and 30.38 for identical Chi-square values at the 1 percent level.

TABLE X. STUDENT OPINION OF NON-PARTICIPANTS WITH RESPECT TO SCHOLASTIC AND SOCIAL BENEFITS OR DETRIMENTS OF THEIR NON-PARTICIPATION

Question*	Percent answering** Male	Female
A. Major reason for non-participation.		
1) Too many studies	25	2
2) outside jobs	17	
3) off campus interests	23	
4) other	1	1
5) no reply	4	1
1 and 2	8	
1 and 3	8	
1 and 4	1	
1, 2, and 3	1	
1, 2, and 4	1	
2 and 3	4	
2 and 4	5	
2, 3, and 4	1	
3 and 4	1	1
B. Because of your non-participation do you feel you are:		
1) Better off scholastically	17	
2) Better off socially	3	
3) Neither	6	1
4) Hindered scholastically	1	
5) Hindered socially	9	2
6) Neither	8	
1 and 2	1	
1 and 6	5	
3, 4, and 5	1	1
3 and 5	5	
4 and 5	3	
3 and 6	24	
no answer	17	1

*See Appendix A. **Total percent participating: male 33, female 11.

Chi-square for question B males: 51.3 (CSq_{01} 24.72).

a) Question A

Do you feel that the time involved was worthwhile?

The vast majority of students answered yes to this question with none of the females and only 5 percent of the males giving a negative reply.

b) Question B

Do you think your activities interfered with your studies; helped with your studies; had no bearing on studies?

Over 50 percent of both groups felt the activities had no bearing on their studies, but, while only a few of the females felt that activities interfered with their studies, 17 percent of the males thought this to be true.

c) Question C

Would you like to participate in more activities; less; no change?

Opinion was divided among the students, as about 40 percent of both male and female students wanted no change and about 50 percent wanted to participate in more activities.

d) Question D

Do you think your activities helped you socially; scholastically; both; neither?

Less than 10 percent of the male and female students thought that they were not helped either socially or scholastically.

Approximately 1/3 of both groups felt they were helped both scholastically and socially and 50 percent of the males and females thought they were helped socially by their activities.

Non-active students

Thirty-three percent of the males and 11 percent of the females did not participate in any of the activities. As the percentage of the non-participating females was too small to give any noticiable trends this group will not be discussed. Trends for the male group are given after the separate question headings.

a) Question A

The reason for non-participation was too many studies; outside job; off campus interests?

The two major reasons given for non-participation was "Too many studies" and "Off campus interests." Another large group included students occupied with outside jobs. Various combinations of reasons usually included "Too many studies" and "Off campus interests."

b) Question B

Because of your non-participation do you feel that you are better off scholastically; better off socially; neither; hindered scholastically; hindered socially; neither?

The majority of students gave "better off scholastically" as the single answer to the question, while the most frequent

combination answer consisted of "no help socially or scholastically" and no hinderance scholastically or socially. It would appear that a large portion of the non-participants felt that they were scholastically better-off while the majority of the rest felt their studies and social life were in no way affected by participation in activities.

I. Summary

General group considerations are given along with the effect of total number of hours of activity participation, academic and athletic activity participation, and their various combinations, on scholarship. Total activities were essentially the same for both groups; however, female grades were slightly higher than male. No statistically significant differences were found with the exception that of the various activity combinations, female students in high academic-medium athletic activities had higher grades than female students in other combinations while those in the low academic-medium athletic activities had lower grades. The effect of home-town on scholarship and activities was examined as was the effect of out-of-state high school experiences. Male students from small towns were found to participate in less hours of organized campus activities per week than those from towns of medium size. No real differences were noted with out-of-state groups. Student attitudes towards activities are discussed. It was felt, by students, that activity participation had slight affects, if any, on scholarship.

This was more evident with respect to females than to males, and in general the students favored activity participation.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A. Summary and Conclusions

The only conclusions based upon statistically significant differences that can be made from this study are that the male students from small towns participate in less hours of organized campus activities per week than those from towns of medium size, and that of the various activity combinations, female students in the high academic-medium athletic category had higher grades than female students in other categories while female students in the low academic-medium athletic category had lower grades than female students in the other categories.

It is probable that students from small towns are not participating in enough activities in high school to stimulate an interest which would carry over to college. It seems unreasonable to assume that the non-participation is due to an intrinsic difference between the students of the different communities and it is more reasonable to attribute the cause of non-participation to the limited facilities of the small town schools. It can be seen from table VII that a similar difference existed between the large and small towns and the fact that this difference is not statistically significant might be because of the limited sampling.

In reference to the statistical differences shown in the female

categories of participation, one of two conclusions could be drawn; either participation in academic activities raises the grade point average of female students or, students of better than average ability prefer this category of participation.

Although the above conclusions were the only ones substantiated by statistical analysis, many trends were evident in the data and should be investigated more extensively. One such trend present in the data for total activity hours and mean grade point averages of the female group (Table II), indicated a very slight increase in the grade point average with increased hours of activities. In Table III, academic activity hours and mean grade point averages of females sampled showed that a similar increase in grade points was present with an increase in activities of an academic nature. In the male group sampled similar trends do not occur and in comparing male and female mean grade point averages with respect to athletic activities, no trends were present for either group. It could tentatively be stated that male grades are not affected by any activities and that female grades tend to improve with an increase in academic activity participation, although once again this may be due to bias of the sample.

Another trend was found in the various combination categories of academic activities grouped with athletic activities, although no significant differences were present among the males. In the female group, however, a trend was present as students in the high

academic-medium athletic category had higher grades than those in the other categories and the students in the low academic-medium athletic category had lower grades. This trend, although not statistically significant, for the males, was present in the identical categories which were statistically significant for the females and would appear to be real.

In the data comparing the size of home-town and participation in activities (Table VIII) no trends were found with the female sample although statistical differences were noted for the male sample as stated earlier.

A comparison which failed to yield any significance or trends was that made between male and female residents of South Dakota and non-residents with reference to hours of activity participation and mean grade point averages. It would appear that either the sampling of non-residents was insufficient to show differences or that high schools of other states are comparable to those of South Dakota in academic and athletic activity preparation for college. Since approximately ¼ of the males sampled were non-residents it would appear that the latter assumption would be the more correct.

From the various percentages noted in this study, definite ideas can be obtained about the two groups sampled. The male group was low in academic, athletic and total activity participation and in the combination categories the majority fell in the low academic-low athletic participation category. The largest percentage of the

males came from home-towns in South Dakota with populations of 1,000 or less. The majority of the females were in the medium category of hours of total or academic participation and in the low category for athletic activity. In the combination categories of academic and athletic participation, the majority of the females were in the medium academic-low athletic category. Similar to the male sample, the majority of females came from small towns in South Dakota; however, the female group was more active in total and academic activity participation than the males although comparable to the males in athletic participation.

It is of interest to note that participation, in general, was higher for the female group than the male and that the various mean grade point averages were almost consistently 0.5 points higher for the female than for the male group. This leads to the general conclusion that activities do not appear to hinder academic achievement and may possibly help.

When the students gave their opinions they were, on the whole, in favor of activities. The students, both male and female, who were engaged in activities overwhelmingly considered them worthwhile and either desired more activities in which to participate, or to maintain the status quo. A large percent of the active students felt their activities had no bearing of any kind on their studies and student opinion was approximately evenly divided between thinking that activities helped socially or that they helped both

socially and scholastically. It appears that the students contradicted themselves; however, since the Chi-square tests showed that student opinion was not distributed at random one could assume that the students felt they did benefit socially, and were not hindered academically and may possibly have gained academically from their activities.

The students who were non-active in organized campus activities gave "too many studies" and "off campus interests" (including working) as their major reasons and felt they were either better-off scholastically or not in any way hindered or helped either socially or scholastically by their non-participation.

From the data and student opinion it can be inferred that activities in general help or have no effect on academic achievement and that the great majority of the students want activities.

B. Recommendations

Activities of both an academic and athletic nature should be encouraged in high school as preparation for college, and in college as they do not appear to hinder academic achievement and may possibly improve grades, and are enjoyed by the students.

The possibility of fraternities at South Dakota State College should be considered as an additional source of organized activities.

More extensive research should be conducted to substantiate or refute the trends which appear in this study.

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APPENDIX

APPENDIX A

Student Questionnaire

Name: _____ Home Town: _____ Major: _____ Year: ____

This questionnaire is being distrubuted in connection with a research program being conducted on State College campus. All information will be used for research purposes only and will be considered strictly confidential. While your name is required in the initial questionnaire data, in the processing of these data all names will lose their identity. This study is in connection with campus activities and student participation and has nothing to do with seeking to limit or control these activities in any way. Your cooperation is needed if this study is to succeed. Please fill out this questionnaire and return it to your professor (women to dorm. counselors) as soon as possible. Base your answers in terms of the fall quarter of 1958 (Sept. 22 - Dec. 19). If you were not actively involved in any of the campus organizations or activities listed during the fall quarter, be sure to fill out the last portion of this questionnaire.

ACTIVITY OR ORGANIZATION	ESTIMATED NUMBER OF HOURS SPENT PER WEEK	TOTAL DAYS SPENT IN ACTIVITY OUTSIDE BROOKINGS
Ag. Club	____	____
Ag. Education Club	____	____
Alpha Phi Omega	____	____
Alpha Psi Omega	____	____
Alpha Zeta	____	____
American Chemical Society	____	____
American Farm Economics Assn.	____	____
Angel Flight	____	____
Arnold Air Society	____	____
Art Club	____	____
American Inst. Elec. Eng.	____	____
American Soc. Agr. Eng.	____	____
American Soc. Civil Eng.	____	____
American Soc. Mech. Eng.	____	____
American Soc. Eng. Physicists	____	____
Bacteriology Club	____	____
Band	____	____

Bethel Student Fellowship
Block and Bridle
Blue Key
Board of Control
Camera Club
Cheer Squad
Chorus Club
Clinical Technology Soc.
Collegian Staff
Dairy Club
Delta Sigma Alpha
Engineers' Council
Epsilon Chi
Eta Kappa Chi
4-H Club
Freshman Class
Gamma Delta
Gamma Sigma Delta
Guidon Club
Home Economics Club
Horticulture-Forestry Club
Industrial Arts Club
International Relations Club
Jack Rabbit
Junior Class
Kappa Delta Pi
Kappa Epsilon
Kappa Psi
Language and Lit. Club
Little International
Lutheran Student Assoc.
Men's Dorm Council
Monogram Club
Newman Club
Nurses Club
Pasquettes
Physical Education Club
Pershing Rifles
Pharmaceutical Assn. (Am.)
Phi Kappa Phi
Phi Upsilon Omicron
Pi Gamma Mu
Pi Kappa Delta
Poultry Science Club
Printonian Club
Religious Council
Rho Chi
Rifle Team
Rodeo Club

Roger Williams Club
Rooter Bums
ROTC Officers Mess
Scabard and Blade
Seeds and Soils Agron. Soc.
Senior Class
Sigma Delta Chi
Sigma Lamoda Sigma
Sigma Pi Sigma
Sigma Tau
Society of Different Arrows
Sophomore Class
Stakota Club
State College Veterans
Statesman
Theta Sigma Phi
Toastmaster's Club
Toastmistresses' Club
Union Board Manangers
University Dames Club
Wesley Foundation
Wesleyan Student Fellowship
Westminister Pilgrim Fellow.
Wildlife Conservation Club
Women Recreation Assn.
Women's Dorm Council
Women's Self Gov. Assn.
Young Democrats
Young Republicans

Athletic practice
Attendance at football games
Attendance other sports
Attendance intramural sports
Practice in intramural sports
Other (list)

_____
_____
_____

If you were involved in campus activities this fall, answer the following questions:

A. Do you feel that the time involved was worthwhile? ___yes ___no ___ don't know.

B. Do you think your activities:
___1. interfered with your studies?
___2. helped your studies?
___3. had no bearing on studies?

C. Would you like to participate in:
___1. more activities?
___2. less activities?
___3. no change.

D. Do you think your activities helped you:
___1. socially?
___2. scholastically?
___3. both 1 and 2?
___4. neither 1 nor 2.

If you were not involved in any campus activities this fall (athletic events not included) answer the following questions:

A. The major reason for non-participation was:
___1. too many studies.
___2. outside job (type of job) _____ hours per week ___
___3. off campus interests.
___4. other (list) _____

B. Because of your non-participation do you feel that you:
___1. are better off scholastically?
___2. are better off socially?
___3. neither 1 nor 2.
___4. are hindered scholastically?
___5. are hindered socially?
___6. neither 5 nor 6.

Comments: